

First report of the genus *Coeliniaspis* Fischer (Hymenoptera, Braconidae, Alysiinae) from China and Russia

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Abstract

Coeliniaspis Fischer, 2010 (Braconidae, Alysiinae, Dacnusiini) is recorded from China and Russia for the first time. *Coeliniaspis insularis* (Tobias, 1998) is reported from China (Fujian), redescribed and illustrated. A key to the species of the genus *Coeliniaspis* Fischer is added. *Coeliniaspis insularis* (Tobias, 1998) and *C. rufiventris* (Tobias, 1998) are new combinations.

Keywords

Taxonomy, parasitoids, new combination, Oriental, China, Fujian, Russia, Dacnusiini, *Coeliniaspis insularis*

Introduction

The genus *Coeliniaspis* Fischer, 2010 (Hymenoptera, Braconidae, Alysini, Dacnini) is a monotypic genus described from Cambodia, with *C. kohkongensis* Fischer, 2010, as type species. According to Griffith's (1964) diagnosis, this genus belongs to the *Coelinus* genus-group. Its biology is unknown, but related genera contain (ovo-) larval parasitoids of Chloropidae (Diptera).

Coeliniaspis is reported here for the first time from China and Far Eastern Russia; it is also the first record outside Cambodia. The species found in China, *C. insularis* comb. n., is redescribed and illustrated. Keys to the genera of *Coelinus* genus-group and the species of *Coeliniaspis* Fischer are provided.

Material and methods

The Chinese specimens were collected in Fujian (southeast China) by sweep-netting in August 2001. For the terminology of morphological features and sculpture, measurements and wing venation nomenclature, see van Achterberg (1988, 1993). The morphological characters were examined and photographed using a Leica M205C digital stereomicroscope. The specimens are deposited in the Beneficial Insects Institute, Fujian Agriculture and Forestry University (Fuzhou, China).

Taxonomy

Coeliniaspis Fischer, 2010

Coeliniaspis Fischer, 2010: 646. Type species (by original designation): *Coeliniaspis kohkongensis* Fischer, 2010 (examined).

Diagnosis. Flagellomeres of antenna densely setose; clypeus flattened, with ventral lamella or more or less depressed medially and sublaterally protruding (Fig. 7; see arrow); mandible with four teeth, additional (= fourth) tooth dorso-basally on middle tooth (Fig. 10); vein r of fore wing arising from or before middle of pterostigma (Fig. 1); second metasomal tergite coarsely sclerotized, distinctly sculptured and with complete sharp lateral crease.

Remarks. *Coeliniaspis* is included in the *Coelinus* genus-group because of the presence of the longitudinal sculpture on the second metasomal tergite, similar to that of the first tergite, the mandible with an additional tooth between first and second teeth, the metapleuron with rugose sculpture and sparsely pubescent, and the first subdiscal cell of fore wing elongate (Fig. 1). For the differences within the *Coelinus* genus-group, see the key below.

Distribution. Oriental (Cambodia, China (new record)), Russia (Far East, new record).

Key to the genera of *Coelinus* genus-group

(modified after van Achterberg, 2014)

- 1 Dorsope absent or nearly so; mesosternum with triangular reticulate-rugose area medio-posteriorly; first metasomal tergite more than 2.3 times as long as its apical width; vein 2-R1 of fore wing frequently rather long [pterostigma usually about as long as vein 1-R1; clypeus strongly protruding forwards]**2**
- Dorsope present; mesosternum with only a narrow crenulate suture medio-posteriorly; first tergite usually less than 2.3 times as long as its apical width; vein 2-R1 of fore wing short or absent**3**
- 2 Vein 1-SR+M of fore wing absent; scutellar sulcus chevron-shaped; pterostigma distinctly longer than vein 1-R1 (= metacarp); clypeus moderately protruding forwards.....***Neocoelinus* Granger, 1949**
- Vein 1-SR+M of fore wing present; scutellar sulcus transverse; pterostigma usually about as long as vein 1-R1; clypeus strongly protruding forwards [fourth metasomal tergite smooth; second tergite not carapace-like and second tergite without complete sharp lateral crease; clypeus without pair of ventral protuberances]***Coelinidea* Viereck, 1913**
- 3 Dorso-posterior half of pronotal side distinctly protruding posteriorly; metasoma of female blade-like compressed posteriorly; head nearly square in dorsal view; vein r of fore wing issued distinctly behind middle of pterostigma**4**
- Dorso-posterior half of pronotal side truncate, at most dorso-apically protruding; metasoma of female less compressed; head transverse in dorsal view; vein r of fore wing usually issued between base and middle of pterostigma or from its middle**5**
4. Vein r of fore wing strongly oblique; first metasomal tergite elongate; entire dorsal half of pronotal side protruding posteriorly***Coelinus* Nees, 1818**
- Vein r of fore wing subvertical; first tergite short; dorsal half of pronotal side less protruding posteriorly [face short, sharp-angularly protruding]***Eucoelinidea* Tobias, 1979**
- 5 Clypeus medio-ventrally depressed (arrow in Fig. 7) and sublaterally protruding or emarginate medio-ventrally and with a pair of small ventral lobes [head cubical (Fig. 8); second metasomal tergite with complete sharp lateral crease (Fig. 5) and third tergite evenly setose] ***Coeliniaspis* Fischer, 2010**
- Clypeus medio-ventrally straight or weakly convex and no ventral protuberances or lamella; sharp lateral crease of second tergite variable, e.g. complete in most *Sarops* spp.**6**
- 6 Third to sixth metasomal tergites densely setose; tarsal claws lamelliform, widened apically in dorsal view; third tergite usually partly or largely sculptured [vein r of fore wing issued near middle of pterostigma; parasitoid of *Lipara* spp. in *Phragmites*-galls]***Polemochartus* Schulz, 1911**
- Third to sixth tergites sparsely setose; tarsal claws normal, cylindrical apically in dorsal view; third tergite smooth.....**7**

- 7 Ventro-lateral corners of clypeus angled; vein r of fore wing issued subbasally from pterostigma; first tergite widened apically; clypeus distinctly protruding in lateral view.....***Laotris* Nixon, 1943**
- Ventro-lateral corners of clypeus rounded; vein r of fore wing issued medially from pterostigma; first tergite subparallel-sided apically; clypeus slightly protruding in lateral view.....***Sarops* Nixon, 1942**

Key to species of *Coeliniaspis* Fischer

- 1 First metasomal tergite 4.9–5.0 times as long as wide apically and about 4.0 times as long as its maximum width (Fig. 4); apical half of second tergite gradually narrowed posteriorly and 6.0 times longer than its apical width (Fig. 6); third tergite smooth; apical half of notauli widely crenulate and connected to medio-posterior depression of mesoscutum (Fig. 3); vertex and frons distinctly remotely punctate (Fig. 8) ***C. insularis* (Tobias, 1998) comb. n.**
- First tergite 1.8–2.5 times as long as wide apically and about twice longer than its maximum width; second tergite parallel-sided and 1.5 times longer than its apical width; third tergite more or less sculptured; notauli developed on anterior half of mesoscutum and absent near medio-posterior depression; vertex and frons finely punctulate [clypeus distinctly emarginate medio-ventrally, resulting in a pair of small ventral lobes] **2**
- 2 Posterior half of notauli present, crenulate and nearly reaching scutellar sulcus; in dorsal view, temple and eye almost equal in length; head in dorsal view 1.5 times wider than long medially; antenna, hind coxa and femur, and apical half of metasoma brownish yellow ***C. rufiventris* (Tobias, 1998) comb. n.**
- Posterior half of notauli absent, remaining far from scutellar sulcus; temple in dorsal view 1.4 times as long as eye; head in dorsal view 1.2 times wider than long medially; antenna black (except for yellow scapus); hind coxa and femur dark brown; apical half of metasoma reddish brown ***C. kobkongensis* Fischer, 2010**

Coeliniaspis insularis (Tobias, 1998), comb. n.

Figs 1–10

Coelinus (*Sarops*) *insularis* Tobias, 1998: 308–309.

Sarops insularis; Fischer, 2001: 45–47 (redescription).

Description. Female (from Mt. Wuyi): Body length 7.5 mm; fore wing length 4.0 mm.

Head. Antenna with 49 segments present and apical part missing, according to original description with 46–56 segments. First flagellomere 1.1 times as long as second flagellomere, second flagellomere as long as third flagellomere. First and second

flagellomeres 1.8 and 1.7 times as long as their maximum width, respectively. Head in dorsal view subquadrate, 1.4 times as wide as its median length. Eye 1.1 times as long as temple (Fig. 8). OOL:OD:POL = 21:8:6. Mandible with 4 teeth, tooth somewhat curved outwards. Additional tooth between first tooth and middle tooth on base of middle tooth. Middle tooth acute and long, other teeth obtuse and shorter (Fig. 10). Face somewhat protruding, strongly punctate, conspicuously setose, with a weak medio-longitudinal crest on its lower half and a depressed medio-dorsally (Fig. 7). Frons setose, somewhat depressed and rugulose medio-anteriorly (Fig. 8). Clypeus slightly convex dorsally, hardly protruding beyond face in lateral view and medio-ventrally distinctly depressed and without ventral lobes (Fig. 7).

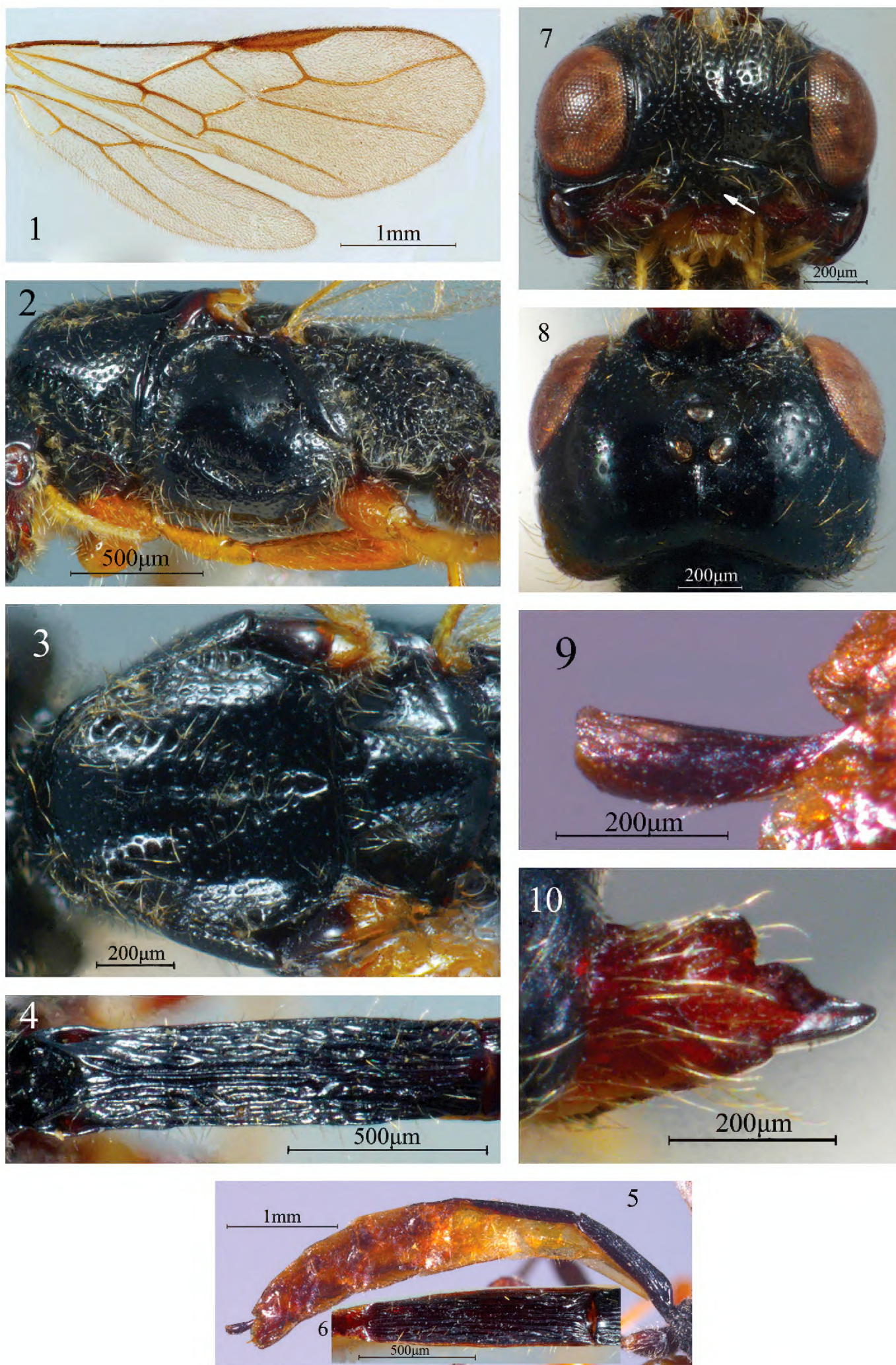
Mesosoma. Length of mesosoma 2.3 times its height. Pronotum with a deep and nearly round pronope (Fig. 8), side of pronotum moderately punctate (Fig. 2). Propleuron largely crenulate-rugose. Mesoscutum conspicuously setose (Figs 2, 3). Notauli complete, wide posteriorly and strongly crenulate. Medio-posterior depression at posterior half of mesoscutum narrow, deep and crenulate (Fig. 3). Scutellar sulcus deep and distinctly crenulate. Scutellum somewhat convex, densely setose. Metanotum with a relatively weak median spine, not protruding beyond scutellum. Propodeum relatively long, largely reticulate-rugose and sparsely setose, medio-longitudinal carina restricted to anterior fifth of propodeum. Mesopleuron mainly glabrous and smooth. Precoxal sulcus long, almost transverse and nearly complete, rugulose (Fig. 2). Mesopleural furrow relatively narrow, curved and evenly crenulate. Metapleuron mainly reticulate-rugose and sparsely setose (Fig. 2).

Wings. Fore wing: pterostigma elliptical, 0.8 times as long as vein 1-R1; vein r arises from middle of pterostigma; vein r:3-SR+SR1:2-SR = 10:64:21; vein 1-SR+M nearly straight; vein 3-SR+SR1 distinctly sinuate (Fig. 1); vein cu-a postfurcal, almost perpendicular to vein 2-CU1 and 2-1A; vein 1-CU1:2-CU1 = 1:7; first subdiscal cell more or less elongate. Hind wing: 1-1A distinctly curved (Fig. 1); vein M+CU:1-M = 3:2.

Legs. Hind femur 4.0 times as long as wide. Hind tibia as long as its tarsus. Outer and inner hind tibial spurs 0.2 and 0.3 times as long as basitarsus, respectively. Hind basitarsus 2.0 times as long as second tarsal segment. Hind telotarsus 0.8 times as long as third tarsal segment.

Metasoma. Tergites very elongate (Figs 4–6). First tergite 4.0 times as long as its maximum width (5.0 times its apical width), parallel-sided, coarsely longitudinally striate and sparsely setose (Fig. 4). Dorsope relatively large and deep (Fig. 4). Laterope large and finely rugose. Second tergite narrow rectangular and with coarse longitudinal striae, 0.85 times as long as first tergite, and its apical half gradually narrowed posteriorly in dorsal view (Fig. 6), its apical width 0.6 times its basal width, largely glabrous and 6.1 times longer than its apical width. Third and following tergites blade-like compressed (Fig. 5), third tergite smooth and setose. Ovipositor widened and distinctly projecting beyond apex of metasoma (Fig. 9), its setose part 0.2 times as long as first tergite.

Colour. Black. Antenna dark reddish brown. Clypeus black, labrum reddish brown, palpi yellow, mandible reddish brown but edge of teeth black. Pterostigma and most veins of hind wing yellowish brown. Fore and middle legs mainly brownish



Figures 1–10. *Coeliniaspis insularis* (Tobias), ♀, China, Mt. Wuyi. **1** wings **2** mesosoma, lateral aspect **3** mesonotum, dorsal aspect **4** first metasomal tergite, dorsal aspect **5** metasoma, lateral aspect **6** second metasomal tergite, dorsal aspect **7** head, anterior aspect (arrow indicates clypeal depression) **8** head, dorsal aspect **9** ovipositor sheath, lateral aspect **10** mandible, full sight on second tooth.

yellow, hind leg dark reddish brown but trochanter brownish yellow. First and second tergites mainly black, third and following tergites yellowish brown, ovipositor sheath largely dark brown (Fig. 9).

Male. Similar to female, but body 7.0 mm long, antenna with 69 segments and head, in dorsal view, 1.4 times as wide as its median length. According to the original description, antenna of paratype male with 59 segments.

Biology. Unknown.

Material examined. 1 ♀, China, Fujian, Mt. Wuyi, 3.VII.1981, leg. Yihua Liu; 1 ♂, same data but leg. Juchang Huang.

Distribution. Known only from the type locality in Far East Russia (Sakhalin Obl.) and from China (Fujian). The species and genus are new for China.

Coeliniaspis rufiventris (Tobias, 1998), comb. n.

Coelinus (*Sarops*) *rufiventris* Tobias, 1998: 311.

Sarops insularis; Fischer 2001: 48–49 (redescription).

Notes. The redescription by Fischer (2001) clearly stated that the clypeus is ventrally indented (“eingedellt”) and is similar to the type species of the genus *Coeliniaspis* Fischer, 2010. Therefore, we transfer this species (only known from Far Eastern Russia) to the latter genus; the genus is new for Russia.

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